

ABSTRACT OF THE DISCLOSURE

A rate generator for generating a plurality of
5 different frequencies that represent video requests in a
video on demand (VOD) system. The rate generator comprises
a plurality of parallel groups, each group comprising a
phase accumulator module having a plurality of phase
10 accumulators, a phase increment model having a plurality of
phase increment registers, and an adder, coupled to the
phase accumulator module and the phase increment module.
The adder sums the phase increment value from the phase from
the phase increment module and the output of the phase
15 accumulator module and provides the value back to the phase
accumulator module. When the sum reaches a pre-determined
value, the adder resets and generates a pulse at a frequency
dependent on the phase increment and the sampling frequency.
In addition, a method for deriving the rate generator
architecture is also provided.

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